

**Role of ayurveda in *mutrashmari* (urolithiasis) a review****Anju M. Hadke,**

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***Author Correspondence:** Email: anjuhadke@gmail.com**Abstract:**

Today's lifestyle, Global warming, faulty Dietary habits, contributes more in formation of urinary calculus. In Ayurvedic texts urinary calculus has been described under the chapter of *Mutrashmari*. Sushrutacharya include *Ashmari* in *Astamahagada*.

According to modern science surgery is the only treatment but recurrence is common. now a day many people die because of kidney diseases because treatment is very costly but some herbs like *Punarnava* (*Boerhaavia diffusa*), *Kulattha* (*Dolicus biflorus*), *Gokshura* (*Tribulus terrestris*), *Apamarga* (*Achayaranths aspera*), *Pashanbheda* (*saxifera ligualta*) and *Varuna* (*Crataeva nurvela*), *Shatavari* (*asparagus racemosus*), *Ela* (*Elettaria cardamomum*), *Ushir* (*vetiveria zizanioidis*) *praval* and *yava*, *Shilsjatu* (*liquidamber orien tallis*), (*Hordeum vulgare*), *Takra*, *Coconut water* (*cocos nucifera*) are useful in early symptom like *Mutrakrushra*, pain, UTI, *mutraghat*, *Mutrashmari* can be prevented by using Some combination like *Yavaksharadi yoga*, *Kulathyadi yoga*, *Varunmulatwak kashay*, *Narikelkusuma yoga*, *Varunadikwath*,

Chandraprabhavati, *NagradiVati*, *Gokshuradiguggul*.

All drug used in this combination are *Bhedak* (Lithotryptic), *Mutral* (Diuretic), Antibacterial, *Shothahar* (Anti-inflammatory) which are beneficial in the management of Urolithiasis. The study has been conducted to explore Ayurvedic drugs to prevent *Mutrashmari*

Keywords: *Mutrashmari*, Urolithiasis, Lithotryptic, Diuretic.

Introduction:

According to epidemiological survey the prevalence of Urolithiasis in developed country is 4% to 20% [1]. According to National Health & Nutrition examination Survey (2012), the incidence of urinary tract stones is 10.6% in men and 7.1% in women in United States [2]

Mutrashmari (Urolithiasis) or urinary calculus below 5 mm size are flush out automatically with urine more than 5 mm size causes pain, dysuria, haematuria. [3]

In Ayurveda, the causes of renal disorders are due to the vitiation of *Mutravaha srotas* (channels carrying urine) Acharya Charaka Explained the common etiological factors (*hetu*) for *mutravahasrotodushti*. viz. Excessive exercise, intake of sharp medicine and dry

food, intake and alcohol in excess, intake of the meat of animals inhabiting marshy land and fish in excess, intake of food before the previous meal is digested, indigestion, injury to organs of *mutravahasrotasa(kshata)*[4] indulging in sex during the urge for micturition (*streesevana*) ,suppress the urge for micturition (*mutranigraha*)[5] due to this *hetusevana* pain in the areas of umbilicus,bladder,perineal,penis &other areas nearby during micturition,interruption of stream of urine, urine mixed with blood ,urine scattering ,resembling like gomedak,turbid containing sand ,there is pain during running ,jumping ,swimming,riding ,exposure to sunlight, long walk .[6]

Pathophysiology:

Sushruta explains long stasis of urine in bladder as precursor of urinary calculi *kapha* get aggravated combines with urine reaches the urinary bladder &stay there, produces calculi [7]

To explain it he gives an example of sedimentation of mud at the bottom of an earthen pot, after prolonged storage of even clear water.

According to *Charaka*, by the action *Vata*, *mutra* get dried with *Shukra* or *Pitta* or *Kapha* , the *Ashmari* is formed in the *Basti* (urinary bladder), as the bile hardens in the Gallbladder of the cow to form the '*Gorochana*'. [8] According to various ayurvedic text *Mutrshmari* is of *vataj*, *Pittaja*,*kaphaj* and *Sukraj* types.[9,10] The clinical symptoms presented by a person who is suffering from *Vataja Ashmari* will forms lumps, have severe pain during micturition ,pain at the umbilical region ,person grinds his teeth ,presses the umbilicus, squeezes the penis and passes

Vata, *Mutra* and *Purisha* with high difficulty.

The *Vataja Ashmari* is blue in *Color*, hard, rough with uneven surface and thorny like *Kadamba* flowers.

The person suffering from *Pittaja Ashmari* will present with burning sensation, difficulty of maturation. the *Ashmari* reddish and yellowish in color and resemble the seed of *bhallataka* or colour like honey.

The person suffering from *Shleshmaja Ashmari* will feel the bladder as though being torn,puncture &pricked heavy&cold , *Ashmari* is white in color, slimy in texture, big like hen's

egg or having color of *Madhuka* flower.

Sukrasmari is develop due to interruption of coitus or too much copulation *sukra* getting dislodged from it seat &obstructed from going out, *vata* get aggravated withholds it between the penis &testicles &dried it up, this stone blocks the urinary passage gives rise to difficult urination, pain &swelling of the bladder &testicles when squeezed by hand ,it break into small pieces [11]

Sushrutacharya has mentioned *Aushadhi chikitsa*, *Basti*

karma, *Kshar karma* and *Shastra karma* as treatments of choice for *Ashmari* On basis of signs and symptoms of *vata*, *pitta*, *kapha*, Apart from medicinal decoctions, *kalkas*,

ghritas, various kinds of foods, preparations of milk, alkalis, honey, *asavas*,

fomentation, *upanaha*,*panchakarma* such as *vamana*, *virechana*, *basti* (medicated enema) such as *niruha*, *anuvasana*, and *uttara-vasti* are employed according to their indications.

According to modern science kidney stones are made up of calcium oxalate and calcium phosphate [12]



Vataja Ashmarican be correlated with calcium oxalate calculus ,*Pittaj* with Uric acid ,Urate, Cystine calculus ,*kaphaj* with Phosphatic calculus[13].

Aim:

To study the role of Ayurvedic drugs in *Mutrashmari*

Methods and Materials:

Classical text of Ayurveda, Research papers, Internet, PubMed

Common Herbs mention by different Samhita

| Samhita | Vataj | Pittaj | Kaphaj |
|------------------|--|---|--|
| Charak | Punarnava,Arandamula, Shatavari,Dashmula,P ashanbheda,kulattha,y ava | Gokshur ,shatavari kush,kash vidarikanda,Ikha,kasheru | Trikatu ,Gokshur,Ela,prav albhasma, |
| Shushrut | Pashanbheda shatavari,kulattha,ush er,yava | kush,kash,asmabheda,Punarnava,Sh ilajatu,Yastimadhu | Trikatu ,Ela,Ushkadi Gana |
| Astang san. | Aranda mula,Bala,Punarnava, Dashmula,Shatavari,P ashanbheda,kulatthaY ava | Asmabheda,Punarnava,Shilajatu,Ya stimadhu,Vidarikanda,Ikha,Drakshr asa,Truppanchamula,kasheruka | Gokshur,Ela,Kada li,Yava,Takra,Gud uchi,kutaj,uhkadi gana |
| Yogarat nakar | Guduchi,Suntha ,Amalaki,Ashvagandh a,Gokshur,pashanbhe da, | Vidarikanda, Ikha, Drakshrasa, kush,kash, Derbha, Gokshur,shatavari,nariken Water, Dhanyaka, pashanbedha, Yshtimadhu, | Yavashar, Ela, Kadali, praval bhasma,Takra, |
| Bhavpra kasha | Laghupanchmula,gok shur,shatavari,aranda, punarnava,kullatha, pashanbedha, yava | Vidarikanda,Ikha,Drakshrasa, kush,kash, Derbha, Gokshur, Satavari,Yashitimadu,Nariken water pashanbheda, shilajit | Yava, Ela, kadali, praval Bhasma, Shatavari, Trikatu. Gokshur,Takra,gu ggul. kusta, musta, devdaru |

Discussion

Following Common drugs are available for the treatment of Mutrakrusra & ashmari

Punarnava(Boerhaavia diffusa) it is having mutravirechan & Shothahar property *Mutral* (Diuretic) [14]

Pashanbheda (Saxifraga ligulata) its mula is *snigdha,tikshna sheet Viryatmak* (cold potency) described as

Ashmaribhedak(Lithotryptic) &*Mutral*(Diuretic) useful in Mutrakrushra, Mutraghat, and diseases of bladder drug.[15]

Gokshur:(*Tribulus Terrestris*)is described as *Bastishodhak* & *mutral* useful in *Ashmari*, *Mutrakrushra*,&diseases of kidney[16]

Kulatha: (*Dolichos biflorus*) because of its *ushna Bhedak* (Lithotryptic) &*Mutral* (Diuretic) property, useful in diseases of bladder [17]

Vidarikanda:(*Pueraria Tuberosa*)due to *madhur ras*&*seeta virya* it is *Mutral*(Diuretic)[18]

Ela:(*Elettaria cardamomum*) due to its *madur rasa*&*seeta virya* is *Mutral*(Diuretic)[19]

Yava:(*Hordeum vulgare*)due to its *madur ras* it is *Mutral*(Diuretic)[20]

Yavakshar: (*Potasii carbonas*) *Mutral* (Diuretic) useful in calculus form by uric acid [21]

Aranda (*ricinus communis*): due to its *vata shamak* ,*shothahar* property it is *vedanashamak*& *Mutral*(Diuretic) leaves relieves pain in bladder[22]

Daruahridra:(*Berberis species*) due to *bastishodhak* *shothhar* property decreases pain &*Mutral*(Diuretic),root is bactericidal [23]

Nariken (*cocos nucifera*): due to its *madur rasa*,*sheeta virya* *mutrajanan*,*mutraverechan* property it is *bastishodhak*& *Mutral*(Diuretic)mula is *Mutral*[24]

Jeshthamadha: (*glycyrrhiza glabra*)-due to its sheet virya,*mutrajanan*, *shothahar*

property it is *Mutral*(Diuretic)*also decreases pain* [25]

Ikha:(*saccharum officina*)due to *sheetvirya* it is *Mutral*(Diuretic)*in mutrajana dravya* it is best[26]

Kusha:(*Eragrostis cynosuroides*)due to *sheet virya* &*mutravirechaniya* property it is *Mutral* used in diseases of bladder[27]

Kasa:(*saccharum spontaneum*)due to its *sheet* property it is *Mutral* [28]

Shatavari(*asparagus racemosus*)due to *sheet* property it is *mutral*&use in *Mutrakrichha*(dysurea)[29]

Kasheru-(*scirpus grossus*)it is *madhur rasatmak*& *sheet viryatmak* act as *mutral*[30]

Trikatu-due to *tikshna*,*ushna* ,*madhur vipak* property,it is *shothahar* ,*vedanahar* *mutral*,[31]

Ushir (*vetiveria zizanioidis*)-due to its *sheet virya* it is work as *mutrajanan*[32]

Bala-(*sida cardifolia*)due to its *madhur*, *sheet* property it is act as *mutrajanan*[33]

Draksharasa-(*vitis venifera*) due to its *madhur* *sheet* property it is *mutral*[34]

Guggul-(*commiphora mukul*)-due to its *ushna virya* ,*tikshna* property it is *mutral*and break the *ashmari*. [35]

Musta(*cyperus rotundus*)due to its *sheet* property it is *mutral*[36]

Varun(*crataeva nurvala* bach-ham)due to its *prabhav* it is *ashmari* *bhedak*,*mutral*, and kills bacteria,*decrease pain*[37]

Ushak (*dorema ammoniacum* don)-due to its *ushna virya* it work as *mutrajanan* [38]

Devdaru-(*cedrus deodara* roxb loud)it is *mutrajanan*[39]

Kusta (*saussurea lappa*)- it is *disinfectant*, *antiseptic* , *mutral*[40]



Shilajit (liquidamber orien tallis)having *katu tikta ras, katu vipak ushna virya* it is *mutal* [41]

Praval-due to its *madhur ras, sheeta virya sarak* property it is *mutral*[42]

Takra-it helps in *Srotorodha* help in *mutra krishara*&removes the pain in bladder, help to remove *ashmari* [43]

Amalaki(*emblica officinalis*)decrease the inflammation of urinary badder[44]

Guduchi(*tinospora cardifolia*)due to *madur vipak ,sheet virya* it is work as *mutrajanan* & so useful in *mutrakrushra*[45]

Conclusion:

Maximum herbs are *Bhedak* (Lithotryptic),*Mutral*(Diuretic), Antibacterial, *Shothahar*(Anti-inflammatory) and useful in diseases of bladder and kidney.

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Cite article

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Ayurlog: National Journal of Research in Ayurved Science- 2018; (6)(5) 1-7